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NOTIFICATIONS BY GOVERNMENT

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ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION

Power Evacuation from Captive Generation, Cogeneration and Renewable Energy Source Power Plants **(Regulation No. 3 of 2017).**

Lr.No.APERC / Secy / F.No.S-19 /17, Dated : 05-06-2017

1. Introduction:

Transmission Corporation of Andhra Pradesh Limited (APTRANSCO), Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL) and Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL) made a proposal, seeking power evacuation guidelines covering different types of Power generation plants like Solar, Wind, Small hydro, Bio-mass and Municipal Solid Waste:

The Commission considered the proposals submitted by the DISCOMs and APTRANSCO and having identified the need for issuing a comprehensive regulation on Power evacuation, a draft regulation was prepared and the draft Regulation was hosted in the Commission's web site for seeking comments/suggestions from interested persons and all stakeholders. Considering all the comments/suggestions, the Commission makes the following Regulation :

2. In exercise of the powers conferred by Section 30, Section 86 (1) (e) and read with sub-section (1) of Section 181 and clause (zp) of sub-section (2) of Section 181 of the Electricity Act, 2003 (36 of 2003) and clause 5.2.26 of National Electricity Policy and clause 5.12 of National Tariff Policy and all other powers enabling it in that behalf, the Andhra Pradesh Electricity Regulatory Commission hereby makes the following Regulations, namely :

3. Short Title, commencement and extent :

a) This Regulation shall be called the “Andhra Pradesh Electricity Regulatory Commission (APERC) Regulation on Power Evacuation from Captive Generation, Cogeneration and Renewable Energy Source Power Plants (Regulation No. 3 of 2017)”.

b) This Regulation shall come into force with effect from the date of its publication in the Andhra Pradesh Gazette.

c) This Regulation shall apply to Distribution Licensees, Transmission Licensees, captive generating plants, cogeneration power plants and all Renewable Energy source power plants.

d) In case of any inconsistency between the provisions of this Regulation and any other Regulation, order or Practice Directions of the Commission, the provisions of this Regulation will prevail.

4. Definitions :

(1) **“Act”** means the Electricity Act, 2003 (36 of 2003) ;

(2) **“Authority”** means the Central Electricity Authority referred to in sub-section(1) of Section 70 ;

(3) **APTRANSCO** means, a transmission company having transmission licence granted under Section 14 of the Act, authorized to undertake transmission activity in the State.

(4) **“Captive generating plant”** means a power plant as defined U/s 2 (8) and shall comply with qualifications prescribed under Rule 3 of the Electricity Rules notified by Central Government U/s 3 of Act as amended from time to time.

(5) **“CERC”** means the Central Electricity Regulatory Commission established under Section 76 of the Act ;

(6) **“Cogeneration”** means a process which simultaneously produces two or more forms of useful energy (including electricity) ;

(7) **APERC** or **“Commission”** means the Andhra Pradesh Electricity Regulatory Commission ;

(8) **“Conservation”** means any reduction in consumption of electricity as a result of increase in the efficiency in supply and use of electricity ;

(9) **“Dedicated feeder (line)[1]’** means any electric supply-line for point to point transmission which are required for the purpose of connecting electric plants of a Captive Generation Plant, Cogeneration Plant or Renewable Energy Source Power Plant like Solar, Wind, Small Hydro, Bio-mass and Municipal Solid Waste (MSW) to APTRANSCO/DISCOM sub-stations.

(10) **"Distribution Licensee"** or "DISCOM" means a licensee authorised to operate and maintain a distribution system for supplying electricity to the consumers in his area of supply;

(11) **"Grid"** means transmission network or distribution network of APTRANSCO/ DISCOM.

(12) **"Licence"** means a licence granted under Section 14 of the Act, 2003 ;

(13) **"SLDC"** or "State Load Dispatch Centre" means the centre established

under Section 31 of the Act ;

(14) **"State"** means the State of Andhra Pradesh.

(15) **"State Grid Code"** means the grid code specified by the Commission.

(16) **"Power evacuation"** means a facility that allows generated power to be immediately transmitted from a generating plant to the grid for further transmission/ distribution to load centers.

(17) **"Reform Act"** means the Andhra Pradesh Electricity Reform Act, 1998.

(18) **"Regulations"** means the regulations made by the Commission under the provisions of the Act;

(19) **"Renewable Energy Sources"** (hereinafter called 'RE Sources') means renewable energy sources such as small hydro, wind, solar, biomass, bio fuel co-generation (including bagasse based co-generation), municipal solid waste and such other sources as recognized or approved by the MNRE or State Government ;

(20) **"Year"** means a period of twelve months from 1st April of a calendar year to 31st March of the following calendar year.

(21) Words and expressions used in this Regulation and not defined herein but defined in the Electricity Act, 2003, shall have the meaning as assigned to them under the Act.

5. General Terms and Conditions

(1) The Generating Plant shall establish, operate and maintain Generating Station, sub-station, tie lines and dedicated transmission lines connected thereto in accordance with :

(a) the technical standards for construction of electrical plants, electric lines and connectivity with the grid as specified by the Authority ;

(b) safety requirements for construction, operation and maintenance of electrical plants and electric lines as specified by the Authority;

(c) Andhra Pradesh Electricity Grid Code or Indian Electricity Grid Code (IEGC) ;

6. Power Evacuation:

(1) Independent projects at a particular location shall normally be connected to the nearest grid substation (SS) of APTRANSCO /DISCOM, as the case may be.

(2) The Solar and Wind power projects developed in cluster will be connected from the pooling bus/substation of the Solar/Wind farm by erection of 11 kV line or 33 kV line or EHT line for connecting to the existing nearest grid substation of APTRANSCO /DISCOM, as the case may be.

7. Criteria for determining the power carrying capacity of conductors:

The calculations are based on Continuous current (Thermal loading) limit at 45°C ambient temperature and Maximum Conductor Temperature (MCT) at 75°C for ACSR and 85°C AAAC as per IS 802 (Part1-Sec-1) -1995. The types of conductors mentioned hereunder are illustrative only and not exhaustive. APTRANSCO/DISCOMs/Project Developers are free to use any equivalent conductor such as All Aluminum Conductors (AAC) or AL 59 or any other conductors that may come in future with technological advancement, depending upon the power to be evacuated. While evacuating power from these power plants, the Power Developers/APTRANSCO/DISCOMs shall select conductors of proper size based on the power capacity to be evacuated.

8. Power Evacuation capacities using different types of conductors for 11 kV, 33 kV and EHT voltages :

(1) Power evacuation at 11 kV level to the existing 33/11 kV SS shall be limited to 3 MW only and power evacuation at 33 kV level to the existing 33/11 kV SS shall be limited to 10 MW only, due to limitation of substation capacity.

(2) Power evacuation at 33 kV level to the EHT SS shall be limited to 40 MW subject to availability of transformation capacity. Power evacuation may be in one or more circuits depending upon availability of bays in that substation and loading per circuit can go upto 25 MW in case of wind power plants and whereas in case of other than wind power plants, loading per circuit shall not exceed 20 MW per circuit.

(3) If required, the DISCOMs/APTRANSCO shall do augmentation of power transformer capacity or bus bar capacity or erection of new bays within three months for 33 kV and six months for EHT and provide connectivity to the prospective power developers for power evacuation.

(4) To arrive at transmission line capacity, thermal loading limit at 2 km/hr wind speed is considered for other than wind power projects.

(5) As mentioned in Central Electricity Authority (CEA) “Manual on Transmission Planning Criteria, January 2013”, Solar/Wind power being intermittent power, for evacuation of power from Solar/Wind power projects, ‘N-I’ criteria is not applied for the immediate connectivity of solar/wind farms with the intra state grid i.e., the line connecting the farm to the grid and the step-up of transformers at the grid substation.

(6) As mentioned in CEA “Manual on Transmission Planning Criteria, January 2013”, the wind and solar farms shall maintain a power factor of 0.98 (absorbing) at their grid inter-connection point for all dispatch scenarios by providing adequate reactive compensation.

9. Power evacuation other than wind power projects:

(a) Power evacuation at 11 kV level:

Table-1				
Sl.No	Conductor	Type	Current at 45 °C Ambient temp of 75°C MCT	Power at 45^{0}C ambient temp & MCT of 75^{0}C (0.95 PF) in MW
1	Rabbit	ACSR	153	2.77
2	Raccoon	ACSR	194	3.51
3	Dog	ACSR	230	4.16
* MCT - Maximum Conductor temperature				

Table-2				
Sl.No	Conductor	Type	Current at 45 °C ambient Temp & MCT of 85°C	Power at 45°C ambient temp & MCT of 85°C (0.95 PF) in MW
1	Rabbit	AAAC	188	3.40
2	Racoon	AAAC	239	4.33
3	Dog	AAAC	274	4.96
* MCT - Maximum Conductor temperature				

(b) Power evacuation at 33 kV level:

Table -3				
Sl.No	Conductor	Type	Current at 45 °C Ambient temp of 75°C MCT	Power at 45°C ambient temp & MCT of 75 °C (0.95 PF) in MW
1	Rabbit	ACSR	153	8.31
2	Raccoon	ACSR	194	10.53
3	Dog	ACSR	230	12.49
4	Wolf	ACSR	315	17.10
5	Panther	ACSR	369	19.87
* MCT - Maximum Conductor temperature				

Table - 4				
Sl.No	Conductor	Type	Current at 45 °C ambient Temp & MCT of 85°C	Power at 45°C ambient temp & MCT of 85 °C (0.95 PF) in MW
1	Rabbit	AAAC	188	10.21
2	Racoon	AAAC	239	12.98
3	Dog	AAAC	274	14.88
4	Wolf	AAAC	388	21.07
5	Panther	AAAC	458	24.87
* MCT - Maximum Conductor temperature				

(c) Power evacuation at EHT level:

The power evacuation capacities from pooling Substation (SS) to EHT SS for different conductors such as Panther ACSR and Zebra ACSR and other Zebra

equivalent conductors at 132 kV and 220 kV level are mentioned below in the Table-5 and Table-6.

Table-5						
Continuous Power (Thermal loading) at 45^{0}C ambient temp. and MCT at 75^{0}C						
Conductor	No. of Circuits	Thermal Current (Amps)	Voltage (kV)	√3	PF	Power (MW)
Panther ACSR	SC	366	132	1.732	0.95	79
	DC	732	132	1.732	0.95	159
Zebra ACSR	SC	560	220	1.732	0.95	202
	DC	1120	220	1.732	0.95	405
* MCT - Maximum Conductor temperature						

<u>Power evacuation capacities from pooling SS to EHT SS at EHT voltage using some of zebra equivalent size conductors:</u>

Table-6						
Continuous Power at 45^{0}C ambient temp and MCT at 85^{0}C (zebra equivalent conductors)						
Conductor	No. of Circuits	Thermal Current (Amps)	Voltage (kV)	√3	PF	Power (MW)
AL 59 (383 sq.mm)	SC	643	132	1.732	0.95	139
	DC	1286	132	1.732	0.95	279
AAAC (479 sq.mm)	SC	700	220	1.732	0.95	253
	DC	1400	220	1.732	0.95	507
* MCT - Maximum Conductor Temperature						

10. Power Evacuation for wind power projects:

a) Power Evacuation at 11 kV level:

The CEA "Manual on Transmission Planning Criteria, January 2013", states that 12 km/hour wind speed may be considered to arrive at the transmission capacity. Since, the height of 11 kV and 33 kV line is around 9 to 11 meters, to arrive at the line capacity, 3 km/hr (25% of 12km/hr) wind speed is considered.

Table-7				
Sl.No	Conductor	Type	Current at 45 °C Ambient temp of 75°C MCT	Power at 45^{0}C ambient temp & MCT of 75^{0}C (0.95 PF) in MW
1	Rabbit	ACSR	176	3.19
2	Raccoon	ACSR	225	4.07
3	Dog	ACSR	267	4.83
* MCT - Maximum Conductor Temperature				

Table-8				
Sl.No	Conductor	Type	Current at 45 °C ambient Temp & MCT of 85°C	Power at 45°C ambient temp & MCT of 85 °C (0.95 PF) in MW
1	Rabbit	AAAC	212	3.84
2	Racoon	AAAC	270	4.89
3	Dog	AAAC	307	5.56
* MCT - Maximum Conductor Temperature				

b) Power evacuation at 33 kV level:

Table – 9 Line capacity at 3 km/hr wind speed				
Sl.No	Conductor	Type	Current at 45 °C Ambient temp of 75°C MCT	Power at 45°C ambient temp & MCT of 75 °C (0.95 PF) in MW
1	Rabbit	ACSR	176	9.56
2	Raccoon	ACSR	225	12.22
3	Dog	ACSR	267	14.50
4	Wolf	ACSR	364	19.76
5	Panther	ACSR	428	23.24
* MCT - Maximum Conductor Temperature				

Table – 10 Line capacity at 3 km/hr wind speed				
Sl.No	Conductor	Type	Current at 45 °C ambient Temp & MCT of 85°C in Amps	Power at 45°C ambient temp & MCT of 85 °C (0.95 PF) in MW
1	Rabbit	AAAC	212	11.51
2	Racoon	AAAC	270	14.66
3	Dog	AAAC	307	16.67
4	Wolf	AAAC	430	23.35
5	Panther	AAAC	514	27.91
* MCT - Maximum Conductor Temperature				

(d) <u>Power evacuation capacities from pooling SS to EHT SS at EHT voltage using ACSR:</u>

The CEA "Manual on Transmission Planning Criteria, January 2013", states that 12 km/hour wind speed may be considered to arrive at the transmission capacity. Since 12 km/hour wind speed may not prevail all along the transmission line, to arrive at the transmission line capacity, thermal loading limit at 6 km/hr (1.6666 m/s) wind speed is considered.

The power evacuation capacities from pooling Substation (SS) to EHT SS for different conductors such as Panther ACSR and Zebra ACSR and other Zebra equivalent conductors at 132 kV and 220 kV level are mentioned below in the Table-11 and Table-12.

Table-11 Continuous Power at 45^{0}C ambient temp. Wind speed = 6 km/hr (1.6666 m/s)						
Conductor	No. of Circuits	Thermal Current (Amps)	Voltage (kV)	√3	PF	Power (MW)
Panther ACSR	SC	535	132	1.732	0.95	116.20
	DC	1070	132	1.732	0.95	232.40
Zebra ACSR	SC	810	220	1.732	0.95	293.21
	DC	1620	220	1.732	0.95	586.42
* MCT - Maximum Conductor temperature at 75^{o}C						

Power evacuation capacities from pooling SS to EHT SS at EHT voltage using some of zebra equivalent size conductors:

Table-12						
Continuous Power at 45^{0}C ambient temp for zebra equivalent conductors at 6 km/hour (1.6666 m/s) wind speed.						
Conductor	No. of Circuits	Thermal Current (Amps)	Voltage (kV)	√3	PF	Power (MW)
AL 59 (383 sq.mm)	SC	1050	220	1.732	0.95	380.09
	DC	2100	220	1.732	0.95	760.17
AAAC (479 sq.mm)	SC	820	220	1.732	0.95	296.83
	DC	1640	220	1.732	0.95	593.66
* MCT - Maximum Conductor Temperature at 85^{o}C						

The above capacities are calculated based on the following assumptions:

- Solar radiations = 1045 W/m2:
- Absorption Coefficient = 0.8
- Emissivity Coefficient = 0.45

11. Metering arrangement and energy accounting:

Installation of meters shall be done in accordance with the Central Electricity Authority (installation and operation of meters) Regulations, 2006 as amended time to time. However, for existing projects the present metering arrangement may be continued.

Before installation, the meters shall be tested by testing agencies having "National Accreditation Board for Testing and Calibration Laboratories" (**NABL**), accreditation. The Meters shall be installed and sealed by the authorized Officers of APTRANSCO and DISCOMs only.

(a) Individual projects:

i) Metering for Small hydro, Bio-mass and Municipal Solid Waste projects for energy accounting shall be provided at the outgoing 33 kV or 11 kV feeder of a Power project connected through 33 kV or 11kV line to the 33/11 kV SS or EHT SS.

ii) Metering point for Solar/Wind individual power projects connected to EHT pooling substation for energy accounting shall be provided after the pooling substation HV bus bar side in Pooling substation.

iii) For Single owner Solar/Wind Projects that are connected to DISCOM/ APTRANSCO SS through a 33 kV (11 kV) line with a pooling bus of 33 kV (11 kV) at the project, metering for energy accounting shall be provided at the outgoing feeder of pooling bus. If pooling bus is not made available by the project developer, the metering for energy accounting shall be provided at incoming feeder of the 33 kV or 11 kV bus bar side of the grid substation and this substation shall be treated as pooling substation.

iv) Multiple Solar/Wind project developers having meters at HV (33 kV) side of individual generator(s) with a pooling bus at the project, common metering point for energy accounting shall be provided at the outgoing feeder of pooling bus. If pooling bus is not made available by the project developer, the common metering point for energy accounting shall be provided at incoming feeder i.e, just before the 33 kV bus bar side of the grid substation and this substation shall be treated as pooling substation. As such, each Solar/Wind power project will have two metering points, one at Project's switchyard and another metering point is common metering point.

The energy to be billed to each Solar/Wind power project towards energy produced shall be calculated as per the formula mentioned below:

Delivered Energy to be billed for an individual project = $X_1 - (X_1 \times Z\%)$

Where

X_1 is the energy reading of the energy meter installed at the Project Site.

Z is the percentage line loss incurred in the 33 kV line between the Project and the Pooling bus or pooling (Receiving) Station and shall be:

$$Z\% = \left\{ \frac{(X_1 + X_2 + X_3 + X_4 + _____) -- Y}{(X_1 + X_2 + X_3 + X_4 + _____)} \right\} X\ 100$$

Where

Y is the energy reading of the common meter and X1, X_2, X_3, X_4 etc., are the energy readings of the energy meters installed at the various individual projects connected to the grid substation.

(b) For Solar/Wind Power Projects under Cluster Scheme upto 10 MW connected to 33/11 kV SS through 33 kV line:

The common metering (energy accounting meter) for Solar/Wind projects connected to a 33 kV SS shall be provided at the outgoing feeder of pooling bus. If pooling bus is not made available by the project developer, the common metering point for energy accounting shall be provided at incoming feeder i.e, just before the 33 kV bus bar side of the grid substation and this substation shall be treated as pooling substation.

Also, metering for each individual project shall be provided at Project's switchyard (on HV side of Generator Transformer). As such, each Solar/Wind power project will have two metering points, one at Project's switchyard and another metering point is common metering point. The energy settlement to each project shall be done as per the formula mentioned in the above para.

(c) For Solar/Wind projects under cluster scheme connected to EHT pooling SS:

The common metering (energy accounting meter) for Solar/Wind projects connected to a Pooling Substation (SS) shall be provided after the pooling substation HV bus bar side in Pooling SS. Also, metering for each individual project shall be provided at Project's switch yard (on 33 kV side of Generator Transformer). As such, each Solar/Wind power project will have two metering points, one at Project's switchyard and another metering point is common metering point for energy accounting at EHT Pooling SS.

Energy accounting: The energy to be billed to each Solar/Wind power project towards energy produced shall be calculated as per the formula mentioned below: Delivered Energy to be billed for an individual project = $X_1 - (X_1 \times Z\%)$

Where

X_1 is the energy reading of the energy meter installed at the Project Site.

Z is the percentage line loss incurred in the electrical network between the project and the EHT side of the Pooling (Receiving) Station and shall be:

$$Z\% = \left\{ \frac{(X_1 + X_2 + X_3 + X_4 + _____) - Y}{(X_1 + X_2 + X_3 + X_4 + _____)} \right\} \times 100$$

Where

Y is the energy reading of the common meter installed on EHT side of the Pooling SS and X1, X2, X3, X4 etc., are the energy readings of the energy meters installed at 33 kV level for the various individual Wind projects connected to the Pooling Station.

12. Cost bearing mechanism of power evacuation:

(a) Individual Solar, Wind, Bio-mass, Municipal Solid Waste (MSW) and cogeneration projects:

The entire cost of evacuation shall be borne by the Power Producer along with metering facility.

(b) Solar or Wind power projects under cluster scheme at 33 kV level:

The Cluster Project Developers shall bear the entire cost of 33 kV pooling SS and 33 kV line for connecting 33 kV Pooling SS with the DISCOM network. The cost of individual metering at project site and cost of common metering at 33 kV side and cost of 11 kV network for connecting individual Solar or Wind power projects to the 33 kV Pooling SS shall also be borne by Project Developer.

(c) Solar or Wind power projects under cluster scheme at EHT Level:

The Cluster Project Developers shall bear the entire cost of EHT pooling SS and EHT line for connecting EHT pooling SS with the grid. The cost of individual metering at project site and cost of common metering at HV bus bar side of EHT pooling SS and cost of 33 kV networks for connecting individual Solar or Wind power projects to the EHT Pooling SS shall also be borne by Project Developer.

(i) Small Hydro Power:

APTRANSCO or DISCOMs shall provide connectivity as close as possible such that no Small Hydro Power Project is required to construct transmission line of more than 2 km length from the power plant to the nearest interconnection point. If the transmission line is not available

closet to the upcoming hydro power station, then the APTRANSCO/ DISCOM shall construct the transmission line at their own cost.

13. Power evacuation scheme finalization:

APTRANSCO/DISCOM shall submit a model single line diagram (drawing) of power evacuation scheme for 33 kV/132 kV/220 kV for Commission approval.

The Project Developer shall approach APTRANSCO/DISCOM in respect of EHT/ DISCOM network, with the details of proposed power project scheme, which shall include power capacity, Project location, proposed site & capacity of Pooling SS, nearest APTRANSCO/DISCOM grid to which the project is intended for interconnection, connecting line, voltage level etc.

APTRANSCO/DISCOM(s) will study the proposed scheme and will dispose the proposals for the technical feasibility for evacuation within 14 days from the date of receipt of application. Any upstream system strengthening requirement shall be borne by APTRANSCO/ DISCOM(s) on a priority basis.

14. Execution of Power evacuation work:

The Developer shall abide by the orders, rules, regulations and terms and conditions as approved by APERC from time to time with regard to power evacuation, transmission and wheeling of energy and operation of Captive Generation/Cogeneration /Solar/Wind/Small Hydro/ MSW power plants .

All electrical installations within the farm site and upto pooling sub-station shall be as per the statutory requirements and shall be certified by the Chief Electrical Inspector General (CEIG) or any other statutory authority.

The developer shall have the discretion in choosing the conductor for connecting the generator to the pooling bus/substation of the developer confirming to CEA Regulations and CEA guidelines, subject to the CEIG approval.

Individual Projects of Bio-mass and Municipal Solid waste Projects:

APTRANSCO/DISCOM will take up the erection of 11 kV, 33 kV or EHT line work from Metering point (Outgoing feeder of power project) to grid substation on payment of total estimated cost by the Project Developer or Power Producer. APTRANSCO/DISCOM is not entitled to levy supervision charges on their internal works.

Alternatively, the Project Developer or Power Producers can take up the work on their own by paying 10% supervision charges to APTRANSCO/DISCOM. After completion of work, the ownership of 11 kV, 33 kV or EHT Line from metering point (Outgoing feeder of power project) to APTRANSCO/DISCOM grid shall be transferred to APTRANSCO/ DISCOM and APTRANSCO /DISCOM shall carryout O&M of 33kV/ EHT line whichever is applicable.

Solar/Wind Projects (For both individual and cluster Scheme projects):

APTRANSCO/DISCOM is not entitled to levy supervision charges on their internal works within the Solar/wind farm site and upto pooling sub-station.

The ownership of 11 kV or 33 kV network along with Pooling SS (33 kV or EHT) will be with the Power Producers. It shall be the duty of the Power Producers, being the owners of the generating companies to operate and maintain the 11 kV or 33 kV network and Pooling SS (33 kV or EHT) as per the rules and regulations made for the purpose.

APTRANSCO/DISCOM will take up the erection of EHT or 33 kV line work from Pooling SS to grid substation on payment of total estimated cost by the Project Developer or Power Producers.

Alternatively, the Project Developer or Power Producer can take up the work on their own by paying 10% supervision charges to APTRANSCO/DISCOM. After completion of work, the ownership of 11 kV or 33 kV or EHT Line from common metering point of Pooling SS/Pooling bus to APTRANSCO/DISCOM grid shall be transferred to APTRANSCO/DISCOM and APTRANSCO/DISCOM shall carryout O&M of EHT/33 kV line whichever is applicable.

15. Testing, Commissioning and Synchronisation with the Grid:

The Project Developer/ Power Producer shall file an application with DISCOM and obtain Temporary Power Supply for construction purpose. The Project Developer shall have to pay all applicable charges for availing temporary power supply.

After complete erection of the power evacuation infrastructure, the concerned Officers of APTRANSCO & DISCOMs shall inspect the same and confirm readiness for energisation.

Power supplied from the grid to Projects during testing and commissioning period shall be charged at the tariff rates as determined by the commission from time to time. The Officers of APTRANSCO & DISCOM will witness testing and satisfactory performance of Generating Companies.

The concerned APTRANSCO/DISCOM will issue permission for synchronization of Power Project with the Grid for Commercial Operation and date on which the 1st machine of the Power Project synchronizes with the grid shall be the Commercial Operation Date (COD) of the project.

16. Maintenance of Transmission lines and Equipment:

(1) The Generating Plant shall be responsible for the maintenance of terminal equipment at the generating station.

(2) The Distribution Licensee or the Transmission Licensee or the State Transmission Utility, as the case may be, shall be responsible for maintenance of transmission lines and of the terminal equipment(s) at the sub-station of the concerned Licensee. The operation and maintenance cost shall be considered as pass through by the Commission while determining the wheeling and transmission charges of the concerned Licensee or State Transmission Utility, as the case may be.

17. Extension of power supply for startup operations or for plant maintenance:

APTRANSCO/DISCOMs shall extend power supply to all these generating plants either at Low Tension (LT) or at High Tension (HT) as desired by the power producer/ Developer for maintenance, startup operations and lighting purpose. The tariff for these plants for

FY2017-18, shall be charged at the rate of Rs 11.77/unit without any fixed charges and minimum charges. The DISCOMs shall file tariff proposals under section 62 of the Electricity Act, 2003 in the ARR proposals of FY 2018-19, for supply of electricity to this type of generating plants.

18. Issue of orders and Practice Directions:

Subject to the provisions of the Act, the A.P Electricity Reform Act, 1998, and this Regulation, the Commission may, from time to time, issue orders and practice directions in regard to the implementation of this Regulation, the procedure to be followed and other matters, which the Commission has been empowered by this Regulation to specify or direct.

19. Power to remove difficulties:

If any difficulties arise in giving effect to any provisions of these Regulations, the Commission may, by general or specific order, make such provisions not inconsistent with the provisions of the Act, or the Reform Act or the rules, regulations or codes made thereunder, which appears to it to be necessary or expedient for the purpose of removing the difficulties.

This Order is signed by the Andhra Pradesh Electricity Regulatory Commission on 05/06/ 2017

(BY ORDER OF THE COMMISSION)

Hyderabad
05-06-2017

Dr. A. SRINIVAS
SECRETARY$_{(I/c)}$

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